

1 Objectives

Your goal for this lecture is to...

- know who your instructors are, and how they plan to organize the course.
- know what you should expect to learn in this course.
- know why we study programming languages.
- know two questions to use to categorize programming languages, and the answers to those questions for your favorite languages.
- know the major themes of this course.
- know a few things about the language we will use.

2 Course Objectives

- Understand major classes of programming languages: techniques, features, styles.
- How to specify formally the meaning of a language — to people and to the computer.
- Three Powerful Ideas:
 1. Recursion
 2. Abstraction
 3. Transformation
- How to choose a language.
- How to implement a language.

Emphasis: learn theory and apply it.

3 Contact Information

Office: 110 SB

Hours: M,W 14.00–15.00, and by appointment.

Email: <beckman.iit@gmail.com> Calendar and IM available at this address also!

Course Web Page: <http://prancingTarantula.net/cs440-sp07>

4 Course Schedule

Date	Title
2007-01-17	Introduction to Languages
2007-01-22	Introduction to OCaml
2007-01-24	Recursion
2007-01-29	User-defined Types
2007-01-31	Higher Order Functions
2007-02-05	Automata
2007-02-07	Grammars
2007-02-12	LL Parsing
2007-02-14	LR Parsing
2007-02-19	Midterm 1
2007-02-21	Unification
2007-02-26	The Call Stack and the Heap
2007-02-28	Type Derivations
2007-03-05	Natural and Operational Semantics
2007-03-07	Lambda-Calculus
2007-03-12	Spring Break
2007-03-14	Spring Break
2007-03-19	Variable Binding
2007-03-21	Parameter Passing
2007-03-26	Continuation Passing Style
2007-03-28	Writing an Interpreter
2007-04-02	Local State and Objects
2007-04-04	Infinite Data and Lazy Evaluation
2007-04-09	Midterm 2
2007-04-11	Prolog
2007-04-16	Cut Operator
2007-04-18	Dynamic Prolog
2007-04-23	Prolog Applications
2007-04-25	TBA
2007-04-30	TBA
2007-05-02	Review Session

5 Assignments

5.1 Breakdown

Category	Number	Weight (each)	Weight (total)
MPs	10	2.0%	20%
Midterms	2	20%	40%
Final	1	30%	30%

The number of MPs will almost certainly change.

6 Grade Cutoffs

Letter	Min. Score
A	85%
B	70%
C	55%
D	40%

7 Survey

- Why are you taking this course? What do you hope to learn?
- What is your major?
- What programming languages would you feel comfortable using to write a large program?
- What operating systems are you comfortable using? How long have you used them?
- Any advice for the instructor?